

WHAT IS CLAIMED IS:

1        1.        A liquid ejecting head, comprising:  
2                a flow passage formation section including:  
3                        a plurality of nozzle openings, ejecting liquid therefrom;  
4                        a plurality of pressure generation parts, corresponding to the  
5 nozzle openings respectively;  
6                        a plurality of liquid supply passages, communicating with the  
7 pressure generation parts respectively for supplying liquid thereto; and  
8                        a plurality of partition wall parts, each separating one liquid  
9 supply passage and its corresponding pressure generation part from another  
10 liquid supply passage and its corresponding pressure generation part; and  
11                a sealing section, sealing the flow passage formation section,  
12                wherein the partition wall parts respectively include liquid supply  
13 passage partition wall parts which separate adjacent liquid supply passages;  
14 and  
15                wherein the sealing section which seals an area of the partition wall  
16 parts and the liquid supply passage of the flow passage formation section has  
17 a thick part and a thin part.

1        2.        The liquid ejecting head as set forth in claim 1, further comprising a  
2 head case section, provided on the flow passage formation section through the  
3 sealing section, and having an expansion coefficient different from that of the  
4 flow passage formation section,  
5                wherein the thick part inside of the area where the head case section

6 is provided on the sealing section is placed in a part of each of the liquid  
7 supply passage partition wall parts.

1 3. The liquid ejecting head as set forth in claim 2, wherein the thick part  
2 is placed in at lease one of a base side close to the pressure generation parts  
3 in the liquid supply passage partition wall parts and a tip side away from the  
4 pressure generation parts in the liquid supply passage partition wall parts.

1 4. The liquid ejecting head as set forth in claim 3, wherein the thick part  
2 placed in the tip sides of the liquid supply passage partition wall parts is formed  
3 contiguously.

1 5. The liquid ejecting head as set forth in claim 3, wherein the thick part  
2 is placed only in the tip side of the liquid supply passage partition wall parts.

1 6. The liquid ejecting head as set forth in claim 3, wherein the sealing  
2 section has a bond thick part outside of the area wherein the head case  
3 section is placed; and  
4 wherein the bond thick part is placed in at least one of the tip side of  
5 the liquid supply passage partition wall parts and the base side of the liquid  
6 supply passage partition wall parts.

1 7. The liquid ejecting head as set forth in claim 2, wherein the thick part  
2 has a first thick part and a second thick part which are separated each other;  
3 wherein the first thick part is placed only on a base side close to the

4 pressure generation parts in the liquid supply passage partition wall parts;  
5 wherein the second thick part is placed only on a tip side away from  
6 the pressure generation parts in the liquid supply passage partition wall parts;  
7 and  
8 wherein a reinforcement member not contributing to expansion is  
9 placed in an intermediate part between the tip side and the base side of the  
10 liquid supply passage partition wall parts.

1 8. The liquid ejecting head as set forth in claim 1, wherein the thick part  
2 and the thin part are separate bodies.

1 9. The liquid ejecting head as set forth in claim 1, wherein the thick part  
2 of the sealing section is comprised of a metal thin film.

1 10. The liquid ejecting head as set forth in claim 1, wherein the thick part  
2 of the sealing section is comprised of a stainless steel thin film; and  
3 wherein the thin part is comprised of a resin thin film.

1 11. The liquid ejecting head as set forth in claim 1, further comprising  
2 a head case section, provided on the flow passage formation section through  
3 the sealing section, and having an expansion coefficient different from that of  
4 the flow passage formation section,  
5 wherein the thick part is placed in the liquid supply passage partition  
6 wall parts; and  
7 wherein the thick part to which the head case section is joined has a

8 width smaller than a width of the corresponding liquid supply passage partition  
9 wall part.

1 12. The liquid ejection head as set forth in claim 11, wherein the thick part  
2 is provided along a longitudinal direction of each of the liquid supply passage  
3 partition wall parts.

1 13. The liquid ejection head as set forth in claim 11, wherein the sealing ...  
2 section corresponding to a portion where the head case section is placed and  
3 the liquid supply passage is placed, is formed with the thin part only; and  
4 wherein the thick part of the sealing section in the portion where the  
5 head case section is placed is formed like comb teeth.

1 14. The liquid ejecting head as set forth in claim 1, further comprising a  
2 head case section, provided on the flow passage formation section through the  
3 sealing section, and having an expansion coefficient different from that of the  
4 flow passage formation section,

5 wherein the flow passage formation section includes a plurality of  
6 island portions which are formed in the liquid supply passages respectively  
7 along a longitudinal direction of the liquid supply passages to prevent pressure  
8 leakage of the pressure generation parts;

9 wherein the thick part is formed corresponding to the island portions  
10 of the flow passage formation section where the head case section is placed;

11 wherein the thick part has a width smaller than a width of the  
12 corresponding island portion; and

13            wherein the thin part of the sealing section is formed corresponding to  
14    the liquid supply passage partition wall part where the head case section is  
15    placed.

1    15.    The liquid ejecting head as set forth in claim 1, further comprising a  
2    head case section, provided on the flow passage formation section through the  
3    sealing section, and having an expansion coefficient different from that of the  
4    flow passage formation section,

5            wherein the thick part of the sealing section placed in the liquid supply  
6    passage partition wall part, to which the head case section is joined has an  
7    area smaller than an area of the corresponding liquid supply passage partition  
8    wall parts.

/    16.    The liquid ejecting head as set forth in claim 1, wherein a plurality of  
2    thin parts are formed on the sealing section corresponding to the liquid supply  
3    passages.

1    17.    The liquid ejecting head as set forth in claim 1, wherein the sealing  
2    section includes a metal thin film and a resin thin film which are overlapped;

3            wherein the resin thin film is placed so as to face the flow passage  
4    formation section; and

5            wherein the thin parts are formed of the resin thin film with the metal  
6    thin film removed.

1    18.    The liquid ejecting head as set forth in claim 17, wherein the metal

2 thin film is formed on the sealing section of the portions corresponding to the  
3 partition wall parts as the thick part.

1 19. The liquid ejecting head as set forth in claim 17, wherein an island  
2 portion is formed on each of the liquid supply passages so as to prevent a  
3 reduction in pressure in each of the pressure generation parts; and  
4 wherein the thick part is formed on the sealing section corresponding  
5 to at least the pressure generation part side of the island portion.

1 20. A liquid ejecting apparatus, comprising:  
2 a liquid ejecting head including:  
3 a flow passage formation section having:  
4 a plurality of nozzle openings, ejecting liquid  
5 therefrom;  
6 a plurality of pressure generation parts,  
7 corresponding to the nozzle openings respectively;  
8 a plurality of liquid supply passages,  
9 communicating with the pressure generation parts respectively for supplying  
10 liquid thereto; and  
11 a plurality of partition wall parts, each separating  
12 one liquid supply passage and its corresponding pressure generation part from  
13 another liquid supply passage and its corresponding pressure generation part;  
14 and  
15 a sealing section, sealing the flow passage formation  
16 section,

17                    wherein the partition wall parts respectively include liquid  
18    supply passage partition wall parts which separate adjacent liquid supply  
19    passages;

20                    wherein the sealing section which seals an area of the  
21    partition wall parts and the liquid supply passage of the flow passage formation  
22    section has a thick part and a thin part.

1    21.    The liquid ejecting apparatus as set forth in claim 20, wherein the ....  
2    liquid ejecting head includes a head case section which is provided on the flow  
3    passage formation section through the sealing section, and the head case  
4    section having an expansion coefficient different from that of the flow passage  
5    formation section; and

6                    wherein the thick part inside of the area where the head case section  
7    is provided on the sealing section is placed in a part of each of the liquid  
8    supply passage partition wall parts.

1    22.    The liquid ejection apparatus as set forth in claim 20, wherein the  
2    liquid ejecting head includes a head case section which is provided on the flow  
3    passage formation section through the sealing section, and the head case  
4    section having an expansion coefficient different from that of the flow passage  
5    formation section;

6                    wherein the thick part is placed in the liquid supply passage partition  
7    wall parts; and

8                    wherein the thick part to which the head case section is joined has a  
9    width smaller than a width of the corresponding liquid supply passage partition

10 wall part.

1 23. The liquid ejecting apparatus as set forth in claim 20, wherein a  
2 plurality of thin parts are formed on the sealing section corresponding to the  
3 liquid supply passages.